



The proximity of a road caused constant sedimentation in Artray Creek, as seen in this pre-restoration photo.

Purpose

This project measures watershed health and evaluates the suitability of future projects through use of the University of California Davis Hydrologic Research Laboratory (UCDHRL) model.

Project Goals

- Purchase and install additional field equipment to increase field monitoring capabilities in the Last Chance Creek Watershed.
- Provide assessments of environmental and water balance impacts of recent and currently funded restoration projects under flood and drought scenarios.
- Help select future restoration projects.
- Create a general protocol to be applied to other Bay-Delta Watersheds.

Award Amount
\$582,000

Watershed
Feather River and Last Chance Creek Watersheds

County
Plumas County

CALFED Region
Sacramento Valley Region

Legislative Districts
US Congress: 2
State Assembly: 4
State Senate: 3

Benefits to the CALFED Program

The Ecosystem Restoration Program Plan states that the Feather River Watershed contributes to the health of the Bay-Delta system by sustaining ecological processes that support anadromous fish and other aquatic and terrestrial wildlife and plant habitats. Streamflow, sediment, and nutrients coming from this watershed are important to the Bay-Delta. This project provides a tool that will build community capacity to assess and manage the Last Chance Creek Watershed as well as other major subwatersheds that make up the Feather River basin, the major water supply basin for the State Water Project, which is an integral inflow component to the Bay-Delta system. The assessment protocol developed as a result of the project will be available for use in other watersheds in the CALFED Program.

Project Overview

The Feather River Watershed is unique as a Sierran river in that approximately 10% of the watershed area is occupied by meadows and valleys. These features historically have served as water, sediment, and nutrient sinks that buffered the watershed from extreme floods, droughts, and landscape disturbances. Over time, approximately 98% of the meadows and valleys in the watershed have become severely entrenched and incised through the cumulative effects of mining, logging, grazing, road building, and extreme wildfire. Thus the watershed has lost the helpful function of these sinks.

The Last Chance Assessment and Model Protocol project is the result of a collaborative effort between the Feather River Coordinated Resource Management Group, the Plumas County Department of Public Works, the Plumas National Forest, and the University of California Davis Hydrologic Research Laboratory (UCDHRL). The project is developing, implementing, and field calibrating an assessment protocol for restoration projects in the Last Chance Creek Watershed, which is a 200 km² subwatershed of the Feather River. The assessment protocol examines the impact that restoration projects have had on the Last Chance Creek Watershed and is general enough so that it can be applied to other watersheds. As part of this assessment protocol, a watershed model is being developed using the UCDHRL watershed model. The model will cover subwatersheds within the whole of the Last Chance Creek Watershed, and it will be capable of assessing both the seasonal and long-term water balances of drought and wet periods, including floodflows and sediment load. The model will also be used to select future restoration projects and project sites, and has the potential to be used to evaluate the watershed effects of large-scale land management decisions in the Feather River basin.



A post-restoration view of Artray Creek, where the road and gully were removed, and cattle access has been restricted.

Contact Information

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